

### **RoHS Lab Analysis Report and Certification**



Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB27A

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors

(piezoelectronic devices) or in a glass or ceramic matrix compound

To view the third party RoHS validation report of these materials, see download procedure below.

1. Open the FTP website on your windows explorer: ftp://pubftp.littelfuse.com/ICP\_Test\_Reports/

2. Retrieve the username and password thru your corresponding Sales / FAE or email envrequests@littelfuse.com

3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Diana Jane D. Gabinete

**Environmental Data Analyst** 

Noted by:



### **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB15A

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors

(piezoelectronic devices) or in a glass or ceramic matrix compound

To view the third party RoHS validation report of these materials, see download procedure below.

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Issued by:

Diana Jane D. Gabinete Environmental Data Analyst

Noted by: Arsenio M. Cesista, Jr.

Global EHS Manager



### **RoHS Lab Analysis Report and Certification**



HF

Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB33CA

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

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- 3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Diana Jane D. Gabinete Environmental Data Analyst

Noted by: Arsenio M. Cesista, Jr.

Global EHS Manager



### **RoHS Lab Analysis Report and Certification**





Product Description: TVS 1.5KW 39V 5%BI DO-214AB TR13 RoHS

Product Number: TPSMB10CA

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

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- 3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Jennilyn R. Dinglasan Global EHS Supervisor



# **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB22CA

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

#### To view the third party RoHS validation report of these materials, see download procedure below.

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- 3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Jennilyn R. Dinglasan Global EHS Supervisor

Noted by: Arsenio M. Cesista, Jr.

Global EHS Manager



# **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R Product Number: TPSMB24A

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This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame/Lead Frame Matrix/TO-220 Lead Frame/Heatsink (Copper Metal)	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating (SMD)	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

### To view the third party RoHS validation report of these materials, see download procedure below.

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- 3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Isidro Escarro Jr. Global EHS Engineer



### **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R Product Number: TPSMB91CA

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame/Lead Frame Matrix/TO-220 Lead Frame/Heatsink (Copper Metal)	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating (SMD)	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

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- 3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Isidro Escarro Jr. Global EHS Engineer



# **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB36CA

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame/Lead Frame Matrix/TO-220 Lead Frame/Heatsink (Copper Metal)	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating (SMD)	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

#### To view the third party RoHS validation report of these materials, see download procedure below.

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- 3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Sharie Lyn S. Mantilla Global EHS Engineer

Noted by:



# **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB68A

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation	7c-l
ICP-0050	F367SN10-90P4	Solder Paste	7a
ICP-0038	Copper	Lead Frame	
ICP-0377	Copper	Clip	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

#### To view the third party RoHS validation report of these materials, see download procedure below.

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- 3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Jennilyn R. Dinglasan Global EHS Supervisor

Noted by: Arsenio M. Cesista, Jr.



# **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB20CA

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

#### To view the third party RoHS validation report of these materials, see download procedure below.

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- 3. Find the corresponding ICP ID and download the corresponding ICP report.

Issued by:

Jennilyn R. Dinglasan Global EHS Supervisor



# **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB75CA

This document hereby certifies that the aforementioned product and all its associated materials, are in compliance with RoHS Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	IC Wafer	Silicon Chip	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0050	F367SN10-90P4	Solder Paste (Gray Paste)	7a
ICP-0038	Copper	Lead Frame	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

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Issued by:

Jennilyn R. Dinglasan Global EHS Supervisor



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### **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB16A

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Furthermore, it is hereby reported that the aforementioned product is composed of the following materials wherein valid Eu RoHS exemptions may be indicated as applicable.

Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	Silicon+Nickel	Silicon Wafer With Nickel Plating	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0038	Copper	Lead Frame/Lead Frame Matrix/TO-220 Lead Frame/Heatsink (Copper Metal)	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0050	F367SN10-90P4	Solder Paste	7a
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating (SMD)	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

#### To view the third party RoHS validation report of these materials, see download procedure below.

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Issued by:

Sharie Lyn S. Mantilla Global EHS Engineer

Noted by:



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### **RoHS Lab Analysis Report and Certification**





Product Description: TVS SURF MT DO214AA AEQ101 T&R

Product Number: TPSMB27CA

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Table 1. Product material composition and applicable RoHS exemption(s)

ICP ID	Raw Material Part Number	Raw Material Description	Applicable RoHS Exemption(s)
ICP-0027	Silicon+Nickel	Silicon Wafer With Nickel Plating	
ICP-0029	Propriety	Wafer Passivation - Glass (White Powder)	7c-l
ICP-0038	Copper	Lead Frame/Lead Frame Matrix/TO-220 Lead Frame/Heatsink (Copper Metal)	
ICP-0377	Copper	Clip (Copper Metal)	
ICP-0050	F367SN10-90P4	Solder Paste	7a
ICP-0051	EME-G630AY	Epoxy Molding Compound	
ICP-0040	Pure Matte Tin	Tin Plating (SMD)	

Remarks:

7a - Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead)
7c-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound

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Issued by:

Sharie Lyn S. Mantilla Global EHS Engineer

Noted by: